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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,734	05/08/2001	Dennis Kwan	04939P001	3654

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EXAMINER	
MURPHY, RHONDA L	
ART UNIT	**PAPER NUMBER**
2667	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/851,734	KWAN, DENNIS	
	Examiner	Art Unit	
	Rhonda Murphy	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17 and 19-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *13-19* is/are allowed.

6)☒ Claim(s) *1-12 and 20-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 May 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This communication is responsive to the amendment filed on September 1, 2005. Accordingly, claims 1-17 and 19-31 are currently pending in this application.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-7 and 20-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collin et al. (US 6,427,178) in view of Weaver (US 6,526,066) and Fung et al. (US 6,243,778).

Regarding claims 1 and 20, Collin teaches a scheduler means (Fig. 5; 506) coupled to the finite state machine (Fig. 5, data pump; col. 5, lines 51-54) and having one or more parameters defining scheduled operations to be performed by the scheduler (col. 3, lines 26-31; col. 5, lines 58-60), wherein the finite state machine is configured to select one or more of the parameters to be used by the scheduler upon transition by the finite state machine from a first state to a second state (col. 5, lines 58-60).

Collin fails to explicitly disclose states and events implemented in hardware and software.

However, Weaver teaches a finite state machine means (Fig. 3) having a plurality of states interconnected through a plurality of events (Fig. 4), wherein states and events are implemented in hardware (col. 4, lines 28-30). Weaver fails to explicitly disclose certain states and events implemented in software. However, Weaver discloses conditions under which the states exist and the conditions for triggering a transition from one state to another are programmable (col. 3, lines 56-61; col. 4, lines 30-33).

Furthermore, Fung teaches partitioning the states and events between hardware and software (col. 5, lines 34-41).

In view of this, it would have been obvious to one skilled in the art to modify the system of Collin, by partitioning the states and events between hardware and software, in order to optimize transmission speed and overall system performance.

Regarding claims 2-3 and 21-22, the combined system of Collin, Weaver and Fung teach a finite state machine and scheduler communicatively coupled.

Collin fails to explicitly disclose a look-up table.

However, Weaver teaches a look-up table unit for storing a look-up table (Fig. 5) that comprises logic having a current state value (col. 4, lines 53-56), event values and next state values associated with the current state value (col. 5, lines 28-34).

In view of this, it would have been obvious to one skilled in the art to modify the system of Collin to incorporate a look-up table for the purpose of obtaining information related to states and events.

Regarding claims 4-5 and 23-24, the combined system of Collin, Weaver and Fung teach a finite state machine and scheduler communicatively coupled.

Collin fails to explicitly disclose a look-up table comprising predefined actions and an action as a data packet transmission.

However, Weaver teaches a look-up table comprising predefined actions (col. 4, lines 62-67; col. 5, lines 1-13); and one action as the transmission of a data packet (col. 4, lines 46-54; col. 5, lines 61-66).

In view of this, it would have been obvious to one skilled in the art to modify the system of Collin, by including a look-up table defining actions, so as to provide a table that list actions to be performed by a device.

Regarding claims 6 and 25, Collin further teaches modem actions (modem tasks; col. 5, lines 60-67) relating to data, fax and speakerphone capabilities.

Collin fails to explicitly disclose decoding an action signal. However, it is known in the art that modem actions involves decode logic to decode the action signal, for the purpose of retrieving data that was originally coded.

Regarding claims 7 and 26, Collin teaches a scheduler comprising parameters (col. 3, lines 26-31; executable entities). Furthermore, it is known in the art for parameters to be stored in parameter registers, so as to maintain a list of parameters.

3. Claims 8-10 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collin, Weaver and Fung, in view of Evoy et al. (US 5,953741).

Regarding claims 8-10 and 27-29, the combined system of Collin, Weaver and Fung teach a scheduler comprising parameter registers.

Collin, Weaver and Fung fail to explicitly disclose parameter registers receiving new parameters from a host processor environment; parameter register configured to receive a selection signal and a period counter.

However, Evoy teaches new parameters loaded from a host processor environment (col. 11, lines 25-34; stack cache 76 represent new parameters loaded from host processor 40). Evoy also teaches parameter registers configured to receive a selection signal (Fig. 2) from finite state machine means (DMA unit 72, col. 10, lines 64-66; col. 11, lines 6-24), the selection signal identifying which parameter to use when performing the scheduled operations (col. 11, lines 25-42); and a period counter means configured to identify a beginning and an end of a period (col. 8, lines 34-38), the period being defined by a period parameter (col. 8, lines 39-42).

In view of this, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined systems, by including new parameters, a selection signal and a period counter, so as to provide flexibility during scheduled operations and record the number of occurrences of a particular event.

4. Claims 11,12,30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collin, Weaver, Fung and Evoy in view of Weeber (US 6,449,292).

Regarding claims 11,12,30 and 31, the combined system of Collin, Weaver, Fung, and Envoy teach a scheduler comprising parameter registers.

Collin, Weaver, Fung and Envoy fail to explicitly teach a slot counter and look-up table actions triggered by a signal transmitted to the slot counter.

However, Weeber teaches a slot counter means configured to identify a beginning and an end of each timeslot within a period (col. 4, lines 18-31) and to transmit a signal identifying each timeslot to a look-up table unit (col. 4, lines 31-33; Fig. 3, look-up table unit represented by RAM **20**); and a look-up table including one or more predefined actions (col. 4, lines 28-31), the actions being triggered by the signal transmitted by the slot counter (Fig. 3, signals 4 and 4a).

In view of this, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined systems, by incorporating a slot counter and look-up table into the system, so as to record the number of occurrences of a particular event within a given period.

Allowable Subject Matter

5. Claims 13-19 are allowed.

Response to Arguments

3. Applicant's arguments filed on 9/1/05 have been fully considered but they are not persuasive. Collin discloses a scheduler and finite state machine (data pump), wherein "the data pump implements the scheduler to select only the appropriate driver modules for the requested modem task" col. 5, lines 58-60. Referring to col. 5, lines 60-67, Collin discloses examples of state changes: the changes from a first state (data modulation operations) to a second state (speaker phone). As previously discussed in the office action dated 6/1/05, Weaver and Fung combined disclose the partition of states and events between hardware and software. Additionally, Collin discloses the interaction of

hardware and software functionality of the modem (col. 1, lines 58-67; col. 2, lines 17-21). Therefore, the combination of Collin, Weaver and Fung would produce a software modem architecture of partitioned hardware and software states, not only to optimize transmission speed and overall system performance, but to integrate the hardware and software functions in the modem, and avoid over consumption of memory (col. 2, lines 8-9). Therefore, Examiner maintains the rejection in that the combined references meet the claimed limitations.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rhonda Murphy whose telephone number is (571) 272-3185. The examiner can normally be reached on Monday - Friday 8:00 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rhonda Murphy
Examiner
Art Unit 2667

rlm

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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER

11/28/05